

What is claimed is:

1. An information processing apparatus, comprising:
  - detection means for detecting a current flowing through a
  - 5 predetermined electrical path in said information processing apparatus;
  - first output means for outputting, when a level of said current detected by said detection means exceeds a predetermined limit level, a first signal indicating so;
  - second output means for outputting, when said first signal is
  - 10 outputted by said first output means, a second signal commanding that a clock frequency of said information processing apparatus be reduced; and
  - frequency control means for controlling such that, when said second signal is outputted by said second output means, said clock frequency of said information processing apparatus is reduced.
  - 15
2. The information processing apparatus according to claim 1, wherein said frequency control means controls so that said clock frequency of said information processing apparatus is reduced utilizing a throttling function of said information processing apparatus after a first period of
- 20 time elapses from when said second signal is outputted by said second output means, and
- said information processing apparatus further comprises terminating means for terminating control of said frequency control means after a second period of time that is predetermined based on said
- 25 first period of time elapses from when control by said frequency control means is initiated.
3. The information processing apparatus according to claim 2, wherein
- 30 said electrical path is a power line through which power is supplied to said information processing apparatus from a predetermined

power supplying device, and

said second period of time is predetermined based on said first period of time so that the average power consumed by said information processing apparatus within a range of a peak power defined as a specification of said power supplying device and a duty rate does not exceed a power corresponding to said limit level.

4. The information processing apparatus according to claim 1, wherein

said second output means includes a microcomputer,  
said information processing apparatus further comprises holding means for holding said first signal outputted by said first outputting means for a third period of time that is at least as long as a polling cycle of said microcomputer, and for outputting said first signal, and  
said second output means outputs said second signal when said first signal held by said holding means is detected.

5. The information processing apparatus according to claim 1, wherein

said electrical path is, of power lines through which power is supplied from a predetermined power supplying device to said information processing apparatus, a current passing line through which all current to be consumed by said information processing apparatus flows,  
a limit value for the current flowing through said current passing line is predetermined based on a capacity of said power supplying device,  
said detection means detects all of said current that is to be consumed by said information processing apparatus and that flows through said current passing line, and  
said first output means outputs said first signal when said level of said current detected by said detection means exceeds said limit level corresponding to said predetermined limit value for said current.

6. The information processing apparatus according to claim 5,  
wherein

said information processing apparatus is capable of using a  
5 plurality of kinds of said power supplying device,

a limit value of a current flowing through said current passing line  
is predetermined for each of said plurality of kinds of power supplying  
devices based on a capacity thereof,

when said information processing apparatus uses a first power  
10 supplying device, said first output means outputs said first signal when  
said level of said current detected by said detection means exceeds a first  
limit level corresponding to said limit value of said current predetermined  
for said first power supplying device, and

when said information processing apparatus uses a second power  
15 supplying device, said first output means outputs said first signal when  
said level of said current detected by said detection means exceeds a  
second limit level corresponding to said limit value of said current  
predetermined for said second power supplying device.

20 7. The information processing apparatus according to claim 6,  
wherein said first power supplying device includes a power supplying  
device of commercial AC power, and said second power supplying device  
includes a battery.

25 8. The information processing apparatus according to claim 5,  
wherein

said detection means includes a detector resistor for detecting a  
current passing through said current passing line as a voltage value  
across both ends thereof, and

30 said first output means includes:

a comparator for comparing the value of a first input to

which said level of said current detected by said detection means is inputted and the value of a second input to which said limit level is inputted, and for outputting said first signal when said value of said first input exceeds said value of said second input;

5                   first supplying means for computing said current level based on a voltage across both ends of said detector resistor in a case where a current actually consumed at that point by said information processing apparatus is flowing through said current passing line and on an output voltage of said power supplying device, and for supplying said  
10   computed current level to said first input of said comparator; and

                  second supplying means for supplying, in a case where a current of said limit value that is predetermined based on said capacity of said power supplying device is flowing through said current passing line, to said second input of said comparator as said limit level a level that is  
15   identical with said current level supplied to said first input of said comparator from said first supplying means.

9.       The information processing apparatus according to claim 1, further comprising:

20           a CPU; and

          a sensor that measures a temperature of said CPU and outputs a measured value, wherein

          said second output means also outputs said second signal when said measured value outputted from said sensor exceeds a predetermined  
25   value.

10.      The information processing apparatus according to claim 1, further comprising a CPU which includes a control terminal shared with a monitor, and which executes control which is control for said control  
30   terminal and where its own operations are periodically and repeatedly paused at a predetermined cycle, wherein

said CPU obtains said second signal via said control terminal when said second signal is outputted by said second output means, and performs said control for said control terminal.

5 11. The information processing apparatus according to claim 1, further comprising a video controller chip having a power saving function and which performs said power saving function when said second signal is outputted by said second output means.

10 12. An information processing method for an information processing apparatus, comprising:

a detection step for detecting a current flowing through a predetermined electrical path in said information processing apparatus;

15 a first output step for outputting, when a level of said current detected in said detection step exceeds a predetermined limit level, a first signal indicating so;

a second output step for outputting, when said first signal is outputted in said first output step, a second signal commanding that a clock frequency of said information processing apparatus be reduced; and

20 a frequency control step for controlling, when said second signal is outputted in said second output step, such that said clock frequency of said information processing apparatus is reduced.

13. A program for causing a computer controlling an information processing apparatus to execute:

25 a detection step for detecting a current flowing through a predetermined electrical path in said information processing apparatus;

30 a first output step for outputting, when a level of said current detected in said detection step exceeds a predetermined limit level, a first signal indicating so;

a second output step for outputting, when said first signal is

outputted in said first output step, a second signal commanding that a clock frequency of said information processing apparatus be reduced; and  
a frequency control step for controlling, when said second signal is outputted in said second output step, such that said clock frequency of  
5 said information processing apparatus is reduced.